### **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection Bay Area Branch

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Contract #: 04-0120F4

Cty: SF/Ala Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-025853 Address: 333 Burma Road **Date Inspected:** 25-Jun-2011

City: Oakland, CA 94607

**OSM Arrival Time:** 1900 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes N/A No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG** Components

### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

### Bay 14

Caltrans and ABF have agreed to conduct visual and magnetic particle (MT) inspections of welds as part of a special joint re-inspection program. In response to ZPMC NDT Inspection Notification Sheet (NWIT) #09592 for magnetic particle testing (MT) inspection of the following:

This QA Inspector performed random visual testing (VT) and then MT of approximately 15% of the area previously tested and accepted by ABF Quality Control personnel. This QA Inspector generated an MT report for this date and provided a turnover to dayshift personnel for tracking of these welds. The members were identified as follows:

OBG Segment 14W, SEG3020W. The weld designations appearing to be visually acceptable, then reviewed by MT were: 024, 025, 026, 027. No apparent MT indications were observed.

OBG Segment 14W, SEG3020K. Weld joints SEG3020K-161, 162, 163, 164, 165, 166, 168, 170, 172, 174, 176, 178, 179, 180, 181, 182, 183, 185, 187, 189, 191, 193 were also listed on NWIT #9592 and were accepted by ABF inspectors. However, this QA Inspector rejected all of the noted welds due to VT indications observed, including hard-adhering slag on the weld joints, uneven surfaces in the cope hole area, and possible weld repairs obscured by copious amounts of debris. No red iron powder used in MT testing or red discoloration was observed at or near

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any of the welds noted. Weld joints SEG3020K-161, 162, 163, 164, 165, 166, 168, 170, 172, 174, 176, 178, 179, 180, 181, 182, 183, 185, 187, 189, 191, 193 were not further reviewed by this QA Inspector.

During random inspection of the above noted welds this QA Inspector observed several gouges between 2mm and 9mm deep on parts designated as X4292K and X8502C. This QA Inspector informed ABF CWI Yang Ye Heng and ZPMC QC Li Jun and generated a Caltrans Incident Report concerning the gouges. See the Caltrans Incident Report for more details and photos.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

## **Summary of Conversations:**

As noted above.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey 15000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet, George	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer